Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in the application:

Please cancel Claims 1-27.

28. A method of providing a multi-layer semiconductor structure, the method comprising:

providing a first semiconductor structure having first and second opposing surfaces; and

disposing a laminate layer over a first one of the first and second opposing surfaces of the first semiconductor structure to provide a first semiconductor structure having a laminate layer disposed thereon.

29. The method of claim 28 further comprising:

disposing a handle member over the laminate layer.

30. The method of claim 29 further comprising:

a substrate on a second one of the first and second opposing surfaces of the first semiconductor structure.

31. The method of claim 30 further comprising:

removing at least a portion of the substrate from the second one of the first and second opposing surfaces of the first semiconductor structure to provide a semiconductor-handle complex.

32. The method of claim 31 further comprising:

providing a second semiconductor structure); and

aligning a first surface of the semiconductor-handle complex with a first surface of the second semiconductor structure.

33. The method of claim 32 further comprising:

bonding the first surface of the second semiconductor structure to the first surface of the semiconductor -handle complex.

34. The method of claim 33 further comprising:

removing the handle member and the laminate layer.

35. The method of claim 28 wherein providing a first semiconductor structure having first and second opposing surfaces comprises:

a substrate having first and second opposing surfaces; and

a first semiconductor structure over a first one of the first and second surfaces of the substrate.

36. The method of claim 28 wherein providing a first semiconductor structure having first and second opposing surfaces comprises:

providing a semiconductor structure comprised of a plurality of thin film semiconductor layers.

37. The method of claim 29 wherein disposing a handle member over the laminate layer comprises:

providing a handle substrate;

disposing a film layer over at least one surface of the handle substrate.

38. The method of claim 37 wherein the film layer is provided from one of: silicon nitride; and silicon dioxide.

39. The method of claim 38 further comprising disposing a laminate over a surface of the handle member.

40. The method of claim 29 wherein disposing a handle member over the laminate layer comprises disposing a handle member over the laminate layer such that a surface of

the laminate adheres to a surface of the handle member.

41. The method of claim 29 wherein disposing the laminate layer over a first one of the first and second opposing surfaces of the first semiconductor structure to provide a semiconductor structure having a laminate layer disposed thereon comprises providing a laminate layer comprised of a plurality of layers.

42. The method of claim 41 wherein providing a laminate layer comprised of a plurality of layers comprises:

providing a first layer corresponding to a release layer;

providing a second layer corresponding to a metal adhesion / diffusion barrier layer; and

providing a third layer corresponding to a fusion layer.

43. The method of claim 42 wherein the release layer comprises at least one of zirconium and aluminum.

44. The method of claim 42 wherein the metal adhesion / diffusion barrier layer comprises tantalum.

45. The method of claim 42 wherein the fusion layer comprises at least one of copper; a polymer; and an inorganic dielectric.

46. The method of claim 41 wherein providing a laminate layer comprised of a plurality of layers comprises:

providing a first layer corresponding to a metal adhesion / diffusion barrier layer;

providing a second layer corresponding to a release layer; and

providing a third layer corresponding to a fusion layer.

47. The method of claim 46 wherein the release layer comprises at least one of zirconium and aluminum.

48. The method of claim 46 wherein the metal adhesion / diffusion barrier layer comprises tantalum.

49. The method of claim 46 wherein the fusion layer comprises at least one of copper, a polymer, and an inorganic dielectric.

50. The method of claim 41 wherein providing a laminate layer comprised of a plurality of layers comprises providing a laminate layer comprised of two layers with a first one of the layers corresponding to a release layer and second one of the layers corresponding to one of:

a polymer having an adhesive characteristic which allows the laminate layer to adhere to the surface of the thin film semiconductor structure;

an inorganic material; and

copper.

51. The method of claim 28 wherein disposing a laminate layer comprises providing a laminate layer comprised of a single layer having an adhesive characteristic which allows the laminate layer to adhere to the surface of the semiconductor structure and having a characteristic such that the layer releases from the surface of the semiconductor structure in response to being exposed to a release agent.

52. The method of claim 29, wherein disposing a laminate layer comprises providing a laminate layer comprised of a single layer having an adhesive characteristic which allows the laminate layer to adhere to a surface of the handle member and having a characteristic such that the layer releases from the surface of the semiconductor structure in response to being exposed to a release agent.

53. The method of claim 31, wherein removing the substrate from the second one of the first and second opposing surfaces of the semiconductor structure to provide a semiconductor-handle complex comprises removing a portion of the second surface of

the semiconductor-handle complex using at least one of: a mechanical grindback, an aqueous chemical etch; a vapor chemical etch; and a plasma etch.

54. The method of claim 33, wherein bonding the first surface of the second semiconductor structure to the first surface of the semiconductor-handle complex comprises providing bonding pads on at least one of the first surface of the second semiconductor structure; and the first surface of the semiconductor-handle complex.

55. The method of claim 54, wherein the bonding pads are provided from at least one of: copper; a polymer; and an inorganic dielectric.

56. The method of claim 34 wherein removing the handle member and the laminate layer comprises using at least one of:

an aqueous-activated method;
a vapor-activated method;
a light-activated method;
a temperature-activated method;
an ion bombardment-activated method;
an electrically-assisted method; and
a mechanical method.

57. The method of claim 28 wherein the semiconductor structure corresponds to a die-to-die semiconductor structure.

58. The method of claim 28 wherein the semiconductor structure corresponds to a die-to-wafer semiconductor structure.

59. The method of claim 28 wherein the semiconductor structure corresponds to a wafer -to-wafer semiconductor structure.

60. The method of claim 28 wherein:

providing a first semiconductor structure having first and second opposing

surfaces comprises providing a first semiconductor structure having a face surface and a backside surface; and

disposing a laminate layer comprises disposing a laminate layer over the face of the first semiconductor structure to provide a semiconductor structure having a laminate layer disposed thereon.

61. The method of claim 32 wherein:

providing a second semiconductor structure comprises providing a second thin film semiconductor structure; and

aligning a first surface of the semiconductor -handle complex with a first surface of the second semiconductor structure comprises aligning the backside of the semiconductor-handle complex with a face of the second thin film semiconductor structure.

62. The method of claim 1 wherein:

the first semiconductor structure corresponds to an original semiconductor substrate;

the first semiconductor-handle complex having a substrate portion corresponds to an original-handle complex having a substrate portion;

the handle-semiconductor complex corresponds to a handle-thin film complex;

the second semiconductor structure corresponds to a second substrate.

63. The method of claim 62 wherein:

the original semiconductor substrate corresponds to a first thin-film substrate

the second substrate corresponds to a second thin-film substrate.

Please add the following new claims.

64. A multi-layer semiconductor structure comprising:

a first semiconductor structure having first and second opposing surfaces; and

a laminate layer over a first one of the first and second opposing surfaces of the

first semiconductor structure to provide a first semiconductor structure having a laminate layer disposed thereon.

65. The structure of claim 64 further comprising a handle member disposed over the laminate layer.

66. The structure of claim 64 further comprising a substrate disposed on a second one of the first and second opposing surfaces of the first semiconductor structure.

67. The structure of claim 64 wherein the first semiconductor structure comprises a plurality of thin film semiconductor layers.

68. The structure of claim 65 further comprising a film layer disposed over at least one surface of the handle member.

69. The structure of claim 68 wherein the film layer is provided from one of: silicon nitride; and silicon dioxide.

70. The structure of claim 68 further comprising a laminate disposed over a surface of the handle member.

71. The structure of claim 64 wherein said laminate layer comprises:
a first layer corresponding to a release layer;
a second layer corresponding to a metal adhesion / diffusion barrier layer; and
a third layer corresponding to a fusion layer.

72. The structure of claim 71 wherein the release layer comprises at least one of zirconium and aluminum.

73. The structure of claim 72 wherein the metal adhesion / diffusion barrier layer comprises tantalum.

74. The structure of claim 73 wherein the fusion layer comprises at least one of copper; a polymer; and an inorganic dielectric.

75. The structure of claim 64 wherein said laminate layer comprises:
a first layer corresponding to a metal adhesion / diffusion barrier layer;
a second layer corresponding to a release layer; and
a third layer corresponding to a fusion layer.

76. The structure of claim 75 wherein the release layer comprises at least one of zirconium and aluminum.

77. The structure of claim 76 wherein the metal adhesion / diffusion barrier layer comprises tantalum.

78. The structure of claim 77 wherein the fusion layer comprises at least one of copper; a polymer; and an inorganic dielectric.

79. The structure of claim 64 wherein said laminate layer comprises two layers with a first one of the layers corresponding to a release layer and second one of the layers corresponding to one of:
a polymer having an adhesive characteristic which allows the laminate layer to adhere to the surface of the thin film semiconductor structure;
an inorganic material; and
copper.

80. The structure of claim 64 wherein said laminate layer comprises a single layer having an adhesive characteristic which allows the laminate layer to adhere to the surface of the semiconductor structure and having a characteristic such that the layer releases from the surface of the semiconductor structure in response to being exposed to a release agent.

81. The structure of claim 64 wherein the semiconductor structure corresponds to a

die-to-die semiconductor structure.

82. The structure of claim 64 wherein the semiconductor structure corresponds to a die-to-wafer semiconductor structure.

83. The structure of claim 64 wherein the semiconductor structure corresponds to a wafer -to-wafer semiconductor structure.

84. The structure of claim 64 wherein a portion of the substrate from the second one of the first and second opposing surfaces of the first semiconductor structure and the handle member provide a semiconductor-handle complex and wherein the structure further comprises:

a second semiconductor structure corresponding to a second thin film semiconductor structure disposed over a first surface of the semiconductor-handle complex with a first surface of the second thin film semiconductor structure aligned with a backside of the semiconductor-handle complex.

85. The structure of claim 84 wherein:

the first semiconductor structure corresponds to an original semiconductor substrate;

the first semiconductor-handle complex having a substrate portion corresponds to an original-handle complex having a substrate portion;

the handle-semiconductor complex corresponds to a handle-thin film complex; and

the second semiconductor structure corresponds to a second substrate.

86. The structure of claim 85 wherein the original semiconductor substrate corresponds to a first thin-film substrate.